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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sherrill J. Packebush

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EXAMINER

PANNALA, SATHYANARAYA R

ART UNIT

PAPER NUMBER

2164

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/079,349	PACKEBUSH ET AL.	
	Examiner	Art Unit	
	Sathyanarayan Pannala	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant Amendment filed on 12/19/2005 has been entered including amended claims 1, 3-4 and added claims 7-33. In this Office Action, claims 1-33 are pending.

Information Disclosure Statement

2. The information disclosure statement filed on 2/13/2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

3. The information disclosure statement filed 2/13/2006 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information

disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Specification

4. Amendment to the specification filed on 12/19/2005 has been entered and the abstract of the disclosure will be amended accordingly.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 recites the limitation "the common node" in page 3, line 12. Claims 21, 27 and 33, recites the limitation "the plurality of nodes" in page 8, line 3; page 9, line 6 and page 11, line 3 respectively, There is insufficient antecedent basis for this limitation in each claim.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. §101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 9-14, 21-26 and 33 are rejected under 35 U.S.C. § 101, because none of the claims are directed to statutory subject matter. Independent claim 9 does not provide any tangible results see *Diehr*, 450 U.S. at 187, 209 and *Corning*, 56 U.S. (15 How.) at 268, 14 L.Ed. 683. Whereas independent claims 21 and 33 are claiming program per se even though the preamble stated as computer readable media in claim 21, and computer system in claim 33 as they are directed to nothing more than abstract ideas. See *Diehr*, 450 U.S. at 185, 209 USPQ at 7; accord, e.g., *Chakrabarty*, 447 U.S. at 309, 206 USPQ at 197; *Parker v. Flook*, 437 U.S. 584, 589, 198 USPQ 193, 197 (1978); *Benson*, 409 U.S. at 67-68, 175 USPQ at 675; *Funk*, 333 U.S. at 130, 76 USPQ at 281. Even though the independent claim 33 is a means plus function, however, in the specification on page 22, lines 4-9 stated as "computer-readable medium including any of the following: ... electromagnetic waves modulated in accordance with the instructions." From the statutory subject matter, a computer disk that solely stores a mathematical formula, or a electromagnetic carrier signal that carries solely a mathematical formula is not statutory. See *Diehr*, 450 U.S. at 192, 209 USPQ at 10; accord *Flook*, 437 U.S. at 590, 198 USPQ at 197.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyness (US Patent 6,496,842) hereinafter Lyness, in view of Hugh (US Patent 6,166,739) hereinafter Hugh and in view of Furnas et al. ("Multitrees: Enriching and Reusing Hierarchical Structure" ACM 4/1994) hereinafter Furnas.

11. As per independent claims 1, 9, 15, 21, 27 and 33, Lyness teaches identifying a hierarchy position in a space defined by a hierarchy of nodes and the space has at least two dimensions (col. 1, line 66 to col. 2, line 1). Lyness teaches as the hierarchy

position may be used to identify a focus of a user's view of the hierarchy. He also teaches displaying representation of nodes of a hierarchy in a space on a display, each node representing fully occupying a subspace within the space, and allocating the space entirely to the subspaces (col. 2, lines 16-22). Lyness teaches the claimed step of "receiving a selection input" as the step 120 monitors the user input device to detect a change in the physical user-input device's 'state' position and button state (Fig. 5, col. 7, lines 10-12).

Further, Lyness teaches the claimed step of "identifying, based on the selection input, a focus node, the focus node being one of the plurality of relational objects" as when the displacement is non-zero in any dimension, the displacement is mapped by 144 to an incremental change in hierarchy 'Focus'. Focus means wherein the hierarchy the user's current view of the hierarchy is centered at one node or between nodes. A user may see one of these surrounding nodes and manipulate the Focus toward that node so that all nodes surrounding that node are now in view (Fig. 5, col. 7, lines 19-30 and col. 5, lines 55-60). Further, Lyness teaches the claimed, the plurality of relational objects comprise a node link structure and the node link structure further comprising a plurality of hierarchies of nodes" (Fig. 1, col. 5, lines 39-41).

Further, Lyness does not explicitly teach with more than one parent. However, Furnas teaches the claimed, a first of the plurality of hierarchies shares the common node with a second of the plurality of hierarchies, the common node has a first parent node (Professor A in Fig. 1) in the first hierarchy and a second parent node (Professor B in Fig. 1) in the second hierarchy, the common node is a parent node for a first child

sub-tree of one or more nodes in the first hierarchy and is a parent node for a second child sub-tree of one or more nodes in the second hierarchy and the first hierarchy does not include the second child sub-tree of one or more nodes (Fig. 1, page 331). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Furnas' teachings would have allowed Lyness's method to create a richer than trees yet still viewable and navigable (page 330, col.1).

Further, Lyness teaches analogous to the displaying nodes as how the display area 402 and 406 shows one possible allocation to three adjacent levels (Fig. 6, col. 8, lines 49-51). Lyness does not explicitly teach displaying Focus node on the computer monitor and determination and displaying of its child node and parent node. However, Hugh teaches the claimed step of "displaying the focus node on a display medium" as central thought (node) 'Central' in the center of the plex 1800 (Fig. 18, col. 11, line 66 col. 12, line 2). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Hugh's teachings would have allowed Lyness's method to create an intuitive and accessible scheme for graphically representing network of thoughts (nodes), providing user with access to diverse types of information in a manner that maximizes access speed but minimizes navigational confusion (col. 2, lines 32-37).

Further, Hugh teaches the claimed step of "determining whether a child node of the focus node exists, wherein the child node comprises one of the plurality of relational objects other than the focus node, the child node having a subordinate relationship with

the focus node” as it determines the children nodes based on the central, for example, Parent 1 is the central node, then the selected (focus) node is Parent 1 and sibling will be shown because they are under the parent 1 node (see 1810) and central node is shown, as it also a child of parent 1 (Fig. 18, col. 12, lines 11-39). Further, Hugh teaches the claimed step of “if a child node exists, displaying on the display medium, the child node” as an example, when the parent node is the selected (focus) node see the display 1810 (Fig. 18, col. 12, lines 14-16 and lines 30-32).

Further, Hugh teaches the claimed step of “determining whether a parent node of the focus node exists, wherein the parent node comprises one of the plurality of relational objects other than the focus node and the child node, the focus node having a relationship subordinate to the parent node” as it determines the sibling 1 as the selected (focus) node, the parent node is parent 1, see 1840 and when child 1 as the selected (focus) node, the parent node is ‘Central’, see 1830 (Fig. 18, col. 12, lines 40-46 and lines 55-65). Finally, Hugh teaches the claimed step of “if a parent object exists, displaying on a display medium the parent node” as when sibling 1 is selected (focus) node it is d Fig. 18, col. 12, lines 42-46 and lines 57-63).

Hugh also teaches the remaining limitations of claim 27, a processor, a memory (Fig.1, col. 6, lines 6-8, lines 11-14).

12. As per dependent claim 2, Lyness teaches the claimed step of “displaying the focus node further comprises displaying the focus node in a textual format, wherein the textual format is a format other than a format that illustrates the focus object and the first related object as nodes connected by a graphical relationship symbol such as a line or

arrow” as to draw node-specific rendering means invoking primitive code to render text and/or graphics (Fig. 12, col. 11, lines 24-25 and col. 13, lines 26-27).

13. As per dependent claim 3, Hugh teaches the claimed step of “displaying as a top grouping a subset of the plurality of relational objects” as it displays parent 1 and parent 2 are top grouping relational objects (Fig. 1). Further, Hugh teaches the claimed step of “receiving a selection input further comprises receiving a selection input that corresponds to a selected one of the relational objects in the top grouping” as the user selects (focus) parent 1 node as in 1810, the sibling 1 and sibling 2 are directly connected as children and ‘Central’ is also a child of parent 1 (Fig. 18, col. 12, lines 11-16 and 30-32). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Hugh’s teachings would have allowed Lyness’s method to create an intuitive and accessible scheme for graphically representing network of thoughts (nodes), providing user with access to diverse types of information in a manner that maximizes access speed but minimizes navigational confusion (col. 2, lines 32-37).

14. As per dependent claim 4, Lyness teaches the claimed step of “receiving a find input” as the step 120 monitors the user input device to detect a change in the physical user-input device’s ‘state’ position and button state (Fig. 5, col. 7, lines 10-12). Further, Lyness teaches analogous to the displaying nodes as how the display area 402 and 406 shows one possible allocation to three adjacent levels (Fig. 6, col. 8, lines 49-51).

However, Hugh teaches the claimed step of “performing a search of the plurality of relational objects in order to determine whether one or more of the relational objects is associated with the find input” as it determines the children nodes based on the central, for example, Parent 1 is the central node as a selected (focus) node and sibling will be shown because they are under the parent 1 node (see 1810) and ‘Central’ node is shown, since it is also a child of parent 1 (Fig. 18, col. 12, lines 11-39). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Hugh’s teachings would have allowed Lyness’s method to create an intuitive and accessible scheme for graphically representing network of thoughts (nodes), providing user with access to diverse types of information in a manner that maximizes access speed but minimizes navigational confusion (col. 2, lines 32-37). Further, Hugh teaches the claimed step of “if one or more of the relational objects is associated with the find input, displaying as a find grouping the one or more relational objects associated with the find input” as if the parent node is the selected (focus) node see 1810 (Fig. 18, col. 12, lines 14-16 and lines 30-32).

15. As per dependent claim 5, Lyness teaches the claimed step of “the selection input identifies one of the relational objects in the find grouping” as the emulated joystick is monitored at step 142 for any displacement from its center position. When the displacement is “non-zero in any dimension, the displacement is mapped by step 144 to an incremental change in hierarchy ‘Focus’ (Fig. 5, col. 7, lines 17-21).

16. As per dependent claim 6, Hugh teaches the claimed step “one or more of the plurality of relational objects represents a person” as for example, one thought (node) might be the type ‘Person’ (col. 25, lines 44-45). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Hugh’s teachings would have allowed Lyness’s method to create an intuitive and accessible scheme for graphically representing network of thoughts (nodes), providing user with access to diverse types of information in a manner that maximizes access speed but minimizes navigational confusion (col. 2, lines 32-37).

17. As per dependent claim 7, Furnas teaches the claimed, the focus node is the common node of the first and second hierarchies (page 331, col. 1). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Furnas’ teachings would have allowed Lyness’s method to create a richer than trees yet still viewable and navigable (page 330, col.1).

18. As per dependent claim 8, Furnas teaches the claimed, identifying a context of the focus node comprises: identifying a context of the focus node based on the selection input (Fig. 1, page 331, col. 1). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Furnas’ teachings would have allowed

Lyness's method to create a richer than trees yet still viewable and navigable (page 330, col.1).

19. As per dependent claims 10, 16, 22 and 28, Hugh teaches the claimed, displaying on a display medium the parent node of the focus node in the hierarchy of nodes determined to be associated with the context of the focus node, (Fig. 9, col. 20, lines 5-9). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Hugh's teachings would have allowed Lyness's method to create an intuitive and accessible scheme for graphically representing network of thoughts (nodes), providing user with access to diverse types of information in a manner that maximizes access speed but minimizes navigational confusion (col. 2, lines 32-37).

20. As per dependent claims 11, 17, 23 and 29, Hugh teaches the claimed, the context of the focus node is associated with the first hierarchy of nodes (Fig. 9, col. 20, lines 5-9). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Hugh's teachings would have allowed Lyness's method to create an intuitive and accessible scheme for graphically representing network of thoughts (nodes), providing user with access to diverse types of information in a manner that maximizes access speed but minimizes navigational confusion (col. 2, lines 32-37).

21. As per dependent claims 12, 18, 24 and 30, Furnas teaches the claimed, providing data to identify the first and second hierarchies of nodes, providing data to identify the first and second parent nodes; and providing data to identify the first and second child sub-trees of nodes (Fig. 1, page 331, col. 1-2). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Furnas' teachings would have allowed Lyness's method to create a richer than trees yet still viewable and navigable (page 330, col.1).

22. As per dependent claims 13, 19, 25 and 31, Furnas teaches the claimed, determining a context of the focus node comprises: providing data identifying one of the first parent node (Professor A in Fig. 1) and the second parent node(Professor B, in Fig. 1), wherein if the first parent node is identified, the context is associated with the first hierarchy of nodes and if the second parent node is identified, the context is associated with the second hierarchy of nodes (Fig. 1, page 331, col. 1-2). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Furnas' teachings would have allowed Lyness's method to create a richer than trees yet still viewable and navigable (page 330, col.1).

23. As per dependent claims 14, 20, 26 and 32, Lyness teaches the claimed, identifying a context of the focus node comprises: providing data identifying a context of the focus node (Fig. 5, col. 7, lines 19-30 and col. 5, lines 55-60).

Response to Arguments

24. Applicant's arguments filed on 12/19/2005 have been fully considered but they are moot in view of the new ground(s) of rejection.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sathyanarayan Pannala
Examiner
Art Unit 2164

srp
March 2, 2006


MOHAMMAD ALI
PRIMARY EXAMINER